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| ERICSSON INC. 6300 LEGACY DRIVE M/S EVR C11 PLANO, TX 75024 | | | LAZARO, DAVID R | |
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DATE MAILED: 06/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/996,687

Applicant(s)

HUNDSCHIEDT ET AL.

Examiner

David Lazaro

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 November 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3/20/02.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1-36 are pending in this office action.

Papers Received

2. Oath/Declaration received 03/20/2002.
3. Change of Address received 04/02/2003
4. Power of Attorney received 09/19/2003

Priority

5. This application claims the benefit of Foreign Application (EPO) 00126227.8 (11/30/2000).
6. Receipt is acknowledged of papers submitted (03/20/2002) under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

7. The information disclosure statement (IDS) submitted on 03/20/2002 has been considered by the examiner.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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9. Claim 21 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

10. Claim 21 recites the limitation "the signals" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 101

11. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

12. Claim 31 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claim 31 describes a computer program product including steps relating to reserving or allocating resources of a network dependent on network traffic characteristics information. However, descriptions of a computer program not encoded on a computer readable medium do not define any structural and functional interrelationships between the computer program and other claimed elements of a computer which permit the computer program's functionality to be realized (See MPEP 2106.IV.B.1(a)). Since the computer program product is not tangibly embodied, Claim 31 is directed to non-statutory subject matter.

Claim Rejections - 35 USC § 102

13. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

14. Claims 1-9, 13, 14, 21, 22, 24 and 30-36 are rejected under 35 U.S.C. 102(b) as being anticipated by RFC 2210 "The Use of RSVP with IETF Integrated Services" by J. Wroclawski (hereinafter RFC 2210).

15. With respect to Claim 1, RFC 2210 teaches a method for performing resource reservations or allocations in a network operated by a given signaling message protocol, the method comprising: generating a sender signal according to the given protocol including sender traffic characteristics information of a sender (Page 4, section 2.1, first paragraph, the Sender Tspec); transmitting the sender signal via at least one network (Page 3, first paragraph); including network traffic characteristics information into the sender signal while being transmitted to obtain an extended sender signal (Page 4, the ADSPEC); the network traffic characteristics information being indicative of traffic characteristics of the network (Page 3, second paragraph and the bullet describing the RSVP ADSPEC object, and Pages 4-5, section 2.1 - Note the ADSPEC object includes traffic characteristics of network elements along the data path which is a part of the network itself. Such characteristics are therefore within the scope of "traffic characteristics of the network".); and reserving or allocating resources of the network in dependence of the network traffic characteristics information (Page 3, second paragraph, and pages 4-5 section 2.1).

16. With respect to Claim 2, RFC 2210 teaches all the limitations of Claim 1 and further teaches transmitting the extended sender signal via at least one router of the at

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least one network; and including or updating the network traffic characteristics information by including or updating information being indicative of traffic characteristics of the at least one router (Page 3, second paragraph and the bullet describing the RSVP ADSPEC object).

17. With respect to Claim 3, RFC 2210 teaches all the limitations of Claim 1 and further teaches receiving the extended sender signal by a receiver; generating a receiver signal according to the given protocol including receiver traffic characteristics information being indicative of traffic characteristics of the receiver (Page 2, last paragraph); including the network traffic characteristics information into the receiver signal to obtain an extended receiver signal (Pages 8-9, section 2.3.2, particularly the first full paragraph on page 9 (starting with "Each receiver...") describing how characteristics from the ADSPEC are used in the generation of the FLOWSPEC which is used in determining reservations) ; and reserving or allocating resources of the network in dependence of the network traffic characteristics information and the receiver traffic characteristics information (Pages 8-9, section 2.3.2, noting the first full paragraph on page 9).

18. With respect to Claim 4, RFC 2210 teaches all the limitations of Claim 3 and further teaches transmitting at least one of the extended sender signal and the extended receiver signal via at least one router of the at least one network; and including or updating the network traffic characteristics information by including or updating information being indicative of traffic characteristics of the at least one router (Page 3,

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second paragraph and the bullet describing the RSVP ADSPEC object, and Pages 4-5, section 2.1.) (Pages 8-9, section 2.3.2 again noting the first full paragraph on page 9).

19. With respect to Claim 5, RFC 2210 teaches all the limitations of Claim 3 and further teaches transmitting the extended receiver signal to the sender via the at least one network; updating the extended receiver signal by including actual network traffic characteristics information while transmitting the receiver signal; and reserving or allocating resources of the at least one network in dependence of the updated extended receiver signal (Pages 8-9, section 2.3.2 noting the 4th paragraph on page 9 (Starting with “When the completely...”)).

20. With respect to Claim 6, RFC 2210 teaches all the limitations of Claim 5 and further teaches transmitting at least one of the extended sender signal, the extended receiver signal and the updated extended receiver signal via at least one router of the at least one network; and including or updating the network traffic characteristics information by including or updating information being indicative of traffic characteristics of the at least one router (Page 3, second paragraph and the bullet describing the RSVP ADSPEC object, and Pages 4-5, section 2.1.) (Pages 8-9, section 2.3.2 again noting the first full paragraph on page 9).

21. With respect to Claim 7, RFC 2210 teaches all the limitations of Claim 1 and further teaches the sender reserves or allocates network resources in dependence from a signal received from the at least one network (Pages 8-9, section 2.3.2 noting the 4th paragraph on page 9 (Starting with “When the completely...”)).

22. With respect to Claim 8, RFC 2210 teaches all the limitations of Claim 1 and further teaches the receiver receives or allocates network resources in dependence of the received extended sender signal (Pages 4-5, section 2.1, particularly 1st paragraph page 5).

23. With respect to Claim 9, RFC 2210 teaches all the limitations of Claim 2 and further teaches the at least one router reserves or allocates its resources in dependence of the received signal received from the at least one network (Page 3, second paragraph and the bullet describing the RSVP ADSPEC object).

24. With respect to Claim 13, RFC 2210 teaches all the limitations of Claim 3 and further teaches the receiver includes a reservation or allocation request into the extended receiver signal in dependence of the received actual reservation or allocation information, the reservation or allocation request being indicative of network resources to be used for communication with the sender (Pages 8-9, section 2.3.2, noting the first full paragraph on page 9).

25. With respect to Claim 14, RFC 2210 teaches all the limitations of Claim 13 and further teaches reserving or allocating network resources in dependence of the reservation or allocation request in the extended receiver signal or the updated extended receiver signal (Pages 8-9, section 2.3.2, noting the first full paragraph on page 9).

26. With respect to Claim 21, RFC 2210 teaches all the limitations of Claim 1 and further teaches the signals include information being indicative whether a resource reservation or allocation is performed for at least one of a message transmitted in a

direction to a receiver and a message transmitted to the sender (Page 5, first 4 paragraphs).

27. With respect to Claim 22, RFC 2210 teaches all the limitations of Claim 21 and further teaches the information included into the transmitted signals comprise an indicator specifying a minimum of required network resources (Page 5, first 4 paragraphs, for example the SENDER_TSPECS).

28. With respect to Claim 24, RFC 2210 teaches all the limitations of Claim 1 and further teaches the given signaling message protocol is the resource reservation protocol (Page 2, section 2 "Use of RSVP), the sender signal is a PATH-message of the resource reservation protocol (Pages 4-5, Section 2.1 Summary of operation), and the receiver signal is a RESV-message of the resource reservation protocol (Pages 4-5, Section 2.1 Summary of operation).

29. With respect to Claim 25, RFC 2210 teaches all the limitations of Claim 1 and further teaches the method is utilized in a network serving at least one of a single-client or a multi-client application.

30. With respect to Claim 30, RFC 2210 teaches a method for performing at least one of resource reservations and resource allocations in a network operated in accordance with a predefined signaling message protocol, the method comprising: generating a sender signal in accordance with the predefined signaling message protocol, the sender signal including sender traffic characteristics information of a sender (Page 4, section 2.1, first paragraph, the Sender Tspec); transmitting the sender signal over the network (Page 3, first paragraph); including network traffic

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characteristics information into the sender signal while the sender signal is transmitted to obtain an extended sender signal (Page 4, the ADSPEC), the network traffic characteristics information being indicative of traffic characteristics of the network (Page 3, second paragraph and the bullet describing the RSVP ADSPEC object, and Pages 4-5, section 2.1 - Note the ADSPEC object includes traffic characteristics of network elements along the data path which is a part of the network itself. Such characteristics are therefore within the scope of "traffic characteristics of the network".); receiving the extended sender signal by a receiver (Page 5, first paragraph); generating a receiver signal in accordance with the predefined signaling message protocol, the receiver signal including receiver traffic characteristics information being indicative of traffic characteristics of the receiver (Page 2, last paragraph); including the network traffic characteristic information into the receiver signal to obtain an extended receiver signal (Pages 8-9, section 2.3.2, particularly the first full paragraph on page 9 (starting with "Each receiver...") describing how characteristics from the ADSPEC are used in the generation of the FLOWSPEC which is used in determining reservations); and reserving or allocating resources of the network in dependence of the network traffic characteristics information and the receiver traffic characteristics information (Page 3, second paragraph, and pages 4-5 section 2.1 and Pages 8-9, section 2.3.2, noting the first full paragraph on page 9).

31. With respect to Claim 31, RFC 2210 teaches a computer program product for performing, when the computer program product is run on a computer system, the steps of: generating a sender signal according to the given protocol including sender traffic

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characteristics information of a sender (Page 4, section 2.1, first paragraph, the Sender Tspec); transmitting the sender signal via at least one network (Page 3, first paragraph); including network traffic characteristics information into the sender signal while being transmitted to obtain an extended sender signal (Page 4, the ADSPEC), the network traffic characteristics information being indicative of traffic characteristics of the network (Page 3, second paragraph and the bullet describing the RSVP ADSPEC object, and Pages 4-5, section 2.1 - Note the ADSPEC object includes traffic characteristics of network elements along the data path which is a part of the network itself. Such characteristics are therefore within the scope of "traffic characteristics of the network".); and reserving or allocating resources of the network in dependence of the network traffic characteristics information (Page 3, second paragraph, and pages 4-5 section 2.1).

32. With respect to Claim 32, RFC 2210 teaches all the limitations of Claim 31 and further teaches the computer program product stored on a computer readable recording medium (Pages 1-3).

33. With respect to Claim 33, RFC 2210 teaches a network system utilizing a given signaling message protocol for network resource reservations and allocations, comprising: a) a sender (Page 4, section 2.1) b) a receiver (Page 4, section 2.1), and c) at least one network for connecting the sender and the receiver (Page 4, section 2.1, wherein the sender is adapted to be operated by the steps of generating a sender signal according to the given protocol including sender traffic characteristics information of a sender (Page 4, section 2.1, first paragraph, the Sender Tspec); transmitting the sender

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signal via at least one network (Page 3, first paragraph); including network traffic characteristics information into the sender signal while being transmitted to obtain an extended sender signal (Page 4, the ADSPEC), the network traffic characteristics information being indicative of traffic characteristics of the network (Page 3, second paragraph and the bullet describing the RSVP ADSPEC object, and Pages 4-5, section 2.1 - Note the ADSPEC object includes traffic characteristics of network elements along the data path which is a part of the network itself. Such characteristics are therefore within the scope of "traffic characteristics of the network".); and reserving or allocating resources of the network in dependence of the network traffic characteristics information (Page 3, second paragraph, and pages 4-5 section 2.1).

34. With respect to Claim 34, RFC 2210 teaches all the limitations of Claim 33 and further teaches wherein the receiver is adapted to be operated by the steps of receiving the extended sender signal by a receiver (Page 5, first paragraph); generating a receiver signal in accordance with the predefined signaling message protocol, the receiver signal including receiver traffic characteristics information being indicative of traffic characteristics of the receiver (Page 2, last paragraph); including the network traffic characteristic information into the receiver signal to obtain an extended receiver signal (Pages 8-9, section 2.3.2, particularly the first full paragraph on page 9 (starting with "Each receiver...") describing how characteristics from the ADSPEC are used in the generation of the FLOWSPEC which is used in determining reservations); and reserving or allocating resources of the network in dependence of the network traffic

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characteristics information and the receiver traffic characteristics information (Pages 8-9, section 2.3.2, noting the first full paragraph on page 9).

35. With respect to Claim 35, RFC 2210 teaches all the limitations of Claim 33 and further teaches further comprising at least one router (Page 4, section 2.1), the at least one router being adapted to be operated by the steps of: transmitting the extended sender signal via the at least one router; and including or updating the network traffic characteristics information by including or updating information being indicative of traffic characteristics of the at least one router (Page 3, second paragraph and the bullet describing the RSVP ADSPEC object).

36. With respect to Claim 36, RFC 2210 teaches all the limitations of Claim 33 and further teaches the given signaling message protocol is the resource reservation protocol (Page 2, section 2 "Use of RSVP").

Claim Rejections - 35 USC § 103

37. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

38. Claims 10-12 and 15-20 rejected under 35 U.S.C. 103(a) as being unpatentable over RFC 2210 in view of "A Reservation -Based Multicast (RBM) routing protocol for mobile networks: Initial route construction phase" by Corson et al. (Corson).

39. With respect to Claim 10, RFC 2210 teaches all the limitations of Claim 1, and further teaches including reservation or allocation information into the sender signal according to the given protocol and reserving or allocating network resources in dependence of the reservation or allocation information (Page 5, 1st paragraph, both the TSPEC and ADSPEC are used in making reservations or allocations). RFC 2210 does not explicitly teach the reservation or allocation information being indicative of network resources to be pre-reserved or pre-allocated such that network resources are pre-reserved or pre-allocated in dependence of the reservation or allocation information. Corson teaches a reservation protocol that allows a given signal to include reservation or allocation information (Pages 434-436, the "*Allocation Procedure*"). The pre-reservation or pre-allocating of network resources is in dependence on this information (Pages 434-436, the "*Allocation Procedure*" describes an allocation packet that includes information for making temporary reservations, which are interpreted as being within the scope of pre-reservations or pre-allocations). The "allocation procedure" allows for maximizing signal quality according to quality measures while still allowing for delivery within real-time thresholds (Page 443, "Reservation phase"). It would have been obvious to one of ordinary skill in the art at the time the invention was made to take the method disclosed by RFC 2210 and modify as indicated by Corson such that the method further comprises including reservation or allocation information into the sender signal according to the given protocol, the reservation or allocation information being indicative of network resources to be pre-reserved or pre-allocated; and pre-reserving or pre-allocating network resources in dependence of the reservation or allocation

information. One would be motivated to have this, as it is desirable to maximizing signal quality according to quality measures while still allowing for delivery within real-time thresholds (Page 443, "Reservation phase" and Page 428, last 2 paragraphs of Corson).

40. With respect to Claim 11, RFC 2210 in view of Corson teaches all the limitations of Claim 10 and further teaches including actual reservation or allocation information into the extended sender signal including the reservation or allocation information, the actual reservation or allocation information being indicative of network resources actually pre-reserved or pre-allocated (In Corson, Pages 432, section 3.1, bullet "RL" describing the routing label which holds the links traversed. A link will only be indicated as being traversed if the resources have actually been allocated - bottom of page 435).

41. With respect to Claim 12, RFC 2210 in view of Corson teaches all the limitations of Claim 11 and further teaches at least one router reserves or allocates available resources thereof in dependence of the reservation or allocation information of the sender and includes the actual reservation or allocation information corresponding to the actually pre-reserved or pre-allocated router resources (In Corson, Pages 432, section 3.1, bullet "RL" describing the routing label which holds the links traversed. A link will only be indicated as being traversed if the resources have actually been allocated - bottom of page 435).

42. With respect to Claim 15, RFC 2210 teaches all the limitations of Claim 14 but does not explicitly disclose at least one router reserves or allocates pre-reserved or pre-allocated router resources in dependence of the reservation or allocation request in the

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signal transmitted from the receiver. Corson teaches a reservation protocol that allows a given signal to include reservation or allocation information (Pages 434-436, the "*Allocation Procedure*"). The pre-reservation or pre-allocating of network resources is in dependence on this information (Pages 434-436, the "*Allocation Procedure*" describes an allocation packet that includes information for making temporary reservations, which are interpreted as being within the scope of pre-reservations or pre-allocations). The pre-reserved or pre-allocated resource can be further released based on exceeding delivery capacity in dependence of a signal transmitted from the receiver (Page 436, first paragraph under "Reallocation phase"). This allows for maximizing signal quality according to quality measures while still allowing for delivery within real-time thresholds (Page 443, "Reservation phase"). It would have been obvious to one of ordinary skill in the art at the time the invention was made to take the method disclosed by RFC 2210 and modify as indicated by Corson such that the method further comprises at least one router reserves or allocates pre-reserved or pre-allocated router resources in dependence of the reservation or allocation request in the signal transmitted from the receiver. One would be motivated to have this, as it is desirable to maximizing signal quality according to quality measures while still allowing for delivery within real-time thresholds (Page 443, "Reservation phase" and Page 428, last 2 paragraphs of Corson).

43. With respect to Claim 16, RFC 2210 teaches all the limitations of Claim 14 but does not explicitly disclose pre-reserved or pre-allocated network resources exceeding the reservation or allocation request of the receiver are released. Corson teaches a

reservation protocol that allows a given signal to include reservation or allocation information (Pages 434-436, the "*Allocation Procedure*"). The pre-reservation or pre-allocating of network resources is in dependence on this information (Pages 434-436, the "*Allocation Procedure*" describes an allocation packet that includes information for making temporary reservations, which are interpreted as being within the scope of pre-reservations or pre-allocations). The pre-reserved or pre-allocated resource can be further released based on exceeding delivery capacity in dependence of a signal transmitted from the receiver (Page 436 , first paragraph under "Reallocation phase"). This allows for maximizing signal quality according to quality measures while still allowing for delivery within real-time thresholds (Page 443, "Reservation phase"). It would have been obvious to one of ordinary skill in the art at the time the invention was made to take the method disclosed by RFC 2210 and modify as indicated by Corson such that the method further comprises pre-reserved or pre-allocated network resources exceeding the reservation or allocation request of the receiver are released. One would be motivated to have this, as it is desirable to maximizing signal quality according to quality measures while still allowing for delivery within real-time thresholds (Page 443, "Reservation phase" and Page 428, last 2 paragraphs of Corson).

44. With respect to Claim 17, RFC 2210 in view of Corson teaches all the limitations of Claim 16 and further teaches at least one router releases its pre-reserved or pre-allocated resources in dependence of the reservation or allocation request in the signal transmitted from the receiver (Page 436 , first paragraph under "Reallocation phase", of Corson).

45. With respect to Claim 18, RFC 2210 teaches all the limitations of Claim 13 and further teaches the receiver includes information into the extended receiver signal (Page 2, last paragraph). RFC 2210 does not explicitly disclose the information being indicative of a maximum or a minimum of pre-reserved or pre-allocated network resources to remain reserved or allocated. Corson teaches a reservation protocol that allows a given signal to include reservation or allocation information (Pages 434-436, the "*Allocation Procedure*"). The pre-reservation or pre-allocating of network resources is in dependence on this information (Pages 434-436, the "*Allocation Procedure*") describes an allocation packet that includes information for making temporary reservations, which are interpreted as being within the scope of pre-reservations or pre-allocations). The pre-reserved or pre-allocated resource can be further released based on exceeding delivery capacity in dependence of a signal transmitted from the receiver (Page 436, first paragraph under "Reallocation phase"). This is done without going below a minimum of pre-reserved or pre-allocated network resources to remain reserved or allocated based on the information in the packet (Page 436, first two paragraphs under "Reallocation phase"). This allows for maximizing signal quality according to quality measures while still allowing for delivery within real-time thresholds (Page 443, "Reservation phase"). It would have been obvious to one of ordinary skill in the art at the time the invention was made to take the method disclosed by RFC 2210 and modify as indicated by Corson such that the method further comprises the receiver includes information into the extended receiver signal, the information being indicative of a maximum or a minimum of pre-reserved or pre-allocated network resources to

remain reserved or allocated. One would be motivated to have this, as it is desirable to maximizing signal quality according to quality measures while still allowing for delivery within real-time thresholds (Page 443, "Reservation phase" and Page 428, last 2 paragraphs of Corson).

46. With respect to Claim 19, RFC 2210 in view of Corson teaches all the limitations of Claim 18 and further teaches pre-reserved or pre-allocated network resources remain reserved or allocated in dependence of the information included into the extended receiver signal being indicative of the maximum or the minimum network resources to remain reserved and or allocated (Page 436 , first two paragraphs under "Reallocation phase", of Corson).

47. With respect to Claim 20, RFC 2210 in view of Corson teaches all the limitations of Claim 19 and further teaches at least on router maintains its pre-reserved or pre-allocated resources in dependence of the receiver information being indicative of the maximum or the minimum of network resources to remain reserved or allocated (Page 436 , first two paragraphs under "Reallocation phase", of Corson).

48. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over RFC 2210 in view of U.S. Patent 6,038,214 by Shionozaki (Shionozaki).

49. With respect to Claim 23, RFC 2210 teaches all the limitations of Claim 22 but does not explicitly disclose pre-reserved or pre-allocated network resources exceeding network resources specified by the indicator are used for at least one network resource request having a higher priority. Shionozaki teaches pre-allocated resources can be

used for a network resource request having a higher priority (Col. 5 lines 4-49). It would have been obvious to one of ordinary skill in the art at the time the invention was made to take the method disclosed by RFC 2210 and modify it as indicated by Shionozaki such that the method further comprises pre-reserved or pre-allocated network resources exceeding network resources specified by the indicator are used for at least one network resource request having a higher priority. One would be motivated to have this, as there is need for using limited resources more effectively (Col. 1 line 66 - Col. 2 line 7 of Shionozaki).

50. Claims 26-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over RFC 2210 in view of "Multicast for RSVP Switching" by Fourmaux et al. (Fourmaux).

51. With respect to Claim 26, RFC 2210 teaches all the limitations of Claim 25 but does not explicitly disclose signals transmitted to the at least one client are transmitted by utilizing a multicasting transmission. Fourmaux teaches RSVP signals transmitted to the client can be transmitted by utilizing a multicast transmission (Page 1, Section 1. "Introduction" to Page 2, second paragraph starting "The 'RSVP Multicast'..."). This allows for an efficient multipoint-to-multipoint communication with Quality of Service support (Page 1, Section 1. "Introduction" to Page 2, second paragraph starting "The 'RSVP Multicast'..."). It would have been obvious to one of ordinary skill in the art at the time the invention was made to take the method disclosed by RFC 2210 and modify it as indicated by Fourmaux such that the method further comprises signals transmitted to the at least one client are transmitted by utilizing a multicasting transmission. One

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would be motivated to have this, as there is need for an efficient multipoint-to-multipoint communication with Quality of Service support (Page 1, Section 1. "Introduction" to Page 2, second paragraph starting "The 'RSVP Multicast'...").

52. With respect to Claim 27, RFC 2210 teaches all the limitations of Claim 25 but does not explicitly disclose signals transmitted to the sender are transmitted by utilizing an inverse multicasting transmission. Fourmaux teaches RSVP signals transmitted the sender can be transmitted by utilizing an inverse multicast transmission (Page 1, Section 1. "Introduction" to Page 2, second paragraph starting "The 'RSVP Multicast'..."). This allows for an efficient multipoint-to-multipoint communication with Quality of Service support (Page 1, Section 1. "Introduction" to Page 2, second paragraph starting "The 'RSVP Multicast'..."). It would have been obvious to one of ordinary skill in the art at the time the invention was made to take the method disclosed by RFC 2210 and modify it as indicated by Fourmaux such that the method further comprises signals transmitted to the sender are transmitted by utilizing an inverse multicasting transmission. One would be motivated to have this, as there is need for an efficient multipoint-to-multipoint communication with Quality of Service support (Page 1, Section 1. "Introduction" to Page 2, second paragraph starting "The 'RSVP Multicast'...").

53. With respect to Claim 28, RFC 2210 in view of Fourmaux teaches all the limitations of Claim 26 and further teaches an aggregation of information into the signals transmitted via the network is performed with the respect to the at least one network or components thereof (Page 13, Section 6, "Aggregation").

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54. With respect to Claim 29, RFC 2210 in view of Fourmaux teaches all the limitations of Claim 27 and further teaches an aggregation of information into the signals transmitted via the network is performed with the respect to the at least one network or components thereof (Page 13, Section 6, "Aggregation").

Conclusion

55. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

56. Mirhakkak et al. "A new approach for providing quality of service in a dynamic network environment" IEEE, MILCOM 2000, Vol. 2, pp. 1020-1025. Discloses an extension to RSVP to allow ranges to be defined for traffic specifications.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Lazaro whose telephone number is 571-272-3986. The examiner can normally be reached on 8:30-5:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on 571-272-4001. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2155

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



David Lazaro
June 9, 2006



PHILIP TRAN (PSA)